DOCUMENT RESUME

ED 064 248 SP 005 771

AUTHOR	Wlodkowski, Raymond J.
TITLE	The Effect of Dissonance and Arousal on Assignment Performance as It Relates to Student Expectancy and Teacher Support Characteristics.
PUB DATE	Apr 72
NOTE	4p.; Paper presented at the Annual Meeting of the American Education Research Assn., Chicago, April 1972
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Ability; *Performance Criteria; *Self Evaluation; *Student Ability; *Student Development; *Teacher Characteristics
IDENTIFIERS	Stanford Achievement Test

ABSTRACT

This report examined student performance expectancies based on self-evaluation of past performance and personal ability. The subjects included 230 male fifth and sixth graders from six randomly selected public elementary schools from a lower-middle class income area of Van Dyke, Michigan. The Arithmetic Computation Test and the Arithmetic Application Test of the Stanford Achievement Test Intermediate II Battery were used as the arithmetic assignments respectively. A Student Expectancy Form, which reported student subjective expectancy for performance on grade equivalent arithmetic problems was verified and pre- and post-tests were administered. The experiment took three sessions, each session occurring on a separate day. When the post-test was completed, the subjects were given an induction check and the experimental manipulations were explained so that all false or negative implications were withdrawn. Results indicate a) teachers should examine other variables in addition to student expectancy in order to determine how they can effectively report their own expectations toward students if they desire to improve students' academic performance, b) there is an optimal level of arousal for each student as it relates to the task in affecting maximum achievement performance on that task, and c) further investigations of those mediating factors which affect the intellectual performance of students in studies concerning teacher expectancy of student performance is necessary. (MJM)

ED 064248

THE EFFECT OF DISSONANCE AND AROUSAL ON ASSIGNMENT PERFORMANCE AS IT RELATES TO STUDENT EXPECTANCY AND TEACHER SUPPORT CHARACTERISTICS

Dr. Raymond J. Wlodkowski
103A Garland Hall
Dept. of Ed. Psych.
School of Education
University of Wisconsin-Milwaukee

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

a) Objectives of the Inquiry - Essentially, the present field experiment examined student expectancies based on self-evaluation of past performance and personal ability. Expectancy was considered in the theoretical framework of Crandall and McGhee (1968). Operationally defined, it is an estimate of the strength of reinforcement or success which an individual expects to occur consequent to his behavior. However, the subject, rather than being confronted with a dissonant performance score, was given a dissonant teacher expectancy for a future assignment. The basic question of the research reported here was whether or not expectancy, as defined here, was a significant factor in relationship to dissonant teacher support characteristics in affecting performance on given assignments. In this respect, two hypotheses were tested: (a) Subjects with a negative expectancy (do not expect to do well on arithmetic problems) who are supported by the experimenter in giving the assignment (conveys to the subjects that he believes that they will do well on the task) will improve their performance more than S's with the same expectancy in contra-support or control situations. Improved performance makes their behavior more consonant with the experimenter's expectancy, thus, reducing the tension elicited by dissonance as well as engendering a more positive self-evaluation. (b) Subjects with a positive expectancy (do expect to do well on arithmetic problems) who are contra-supported by the experimenter in giving the assignment (conveys to

SP005 771

the subjects that he believes that they will not do well on the task) will improve their performance more than S's with the same expectancy in support or control situations. Improved performance reduces the tension elicited by dissonance by proving the experimenter's expectancy to be irrelevant as well as maintaining positive self-evaluation.

A cognitively more complex assignment (arithmetic story problems) as well as a cognitively more simple assignment (basic computation problems) were utilized in order to check the extent to which the student's dissonantly increased level of arousal might influence the quality of his performance on varied cognitive tasks.

b) Method and Data Source - The S's completing the field experiment were 230 male fifth and sixth graders from the public school system of Van Dyke, Michigan. They represented six randomly selected elementary schools from a lower-middle class income area.

The Arithmetic Computation Test and Arithmetic Applications Test of the Stanford Achievement Test Intermediate II Battery (Kelley, etc., 1964) was used as the cognitively more simple and cognitively more complex arithmetic assignments respectively. For both types of tests equivalent forms X and W were used as the pretest and post test. Each student was administered a Student Expectancy Form on which his reported subjective expectancy for performance on grade equivalent arithmetic problems was verified.

In each school the experiment took three sessions each session occurring on a separate day.

When the post test was completed, the subjects were given an induction check and the experimental manipulations were explained so that all false or negative implications were withdrawn.

The two combined independent variables were committed student expectancy (positive or negative) and type of experimenter support (supportive, contra-

supportive, or none-control). The dependent variable was the subject's gain score (post test minus pretest). A one-way analysis of variance for the comparison of the mean gain scores of the experimental and control groups was performed.

c) Results - Although three of the four designated experimental groups achieved mean gain scores in the direction predicted, for all paired groups the variance between the mean gain scores was not statistically significant ($p > .05$). Therefore, committed student expectancy as a variable when coupled with the variable of dissonant teacher support on a given assignment did not form a functional combination which related to significantly improved student performance.

When the proportion of S's showing post test improvement were considered on the basis of arithmetic ability in relation to the cognitive complexity of the given assignments, predictable significant results were found. A comparison of the independent proportions of students showing post test improvement in the experimental groups on the more simple and more complex assignments was performed. As predicted, a significantly higher proportion of students ($Z = 1.80$, $p < .04$) in the Negative Expectancy-"Support" group (low arithmetic ability) showed post test improvement on the more simple assignment. Also as predicted, a significantly higher proportion of students ($Z = 1.97$, $p < .025$) in the Positive Expectancy-"Contra-Support" group (high arithmetic ability) showed post test improvement on the more complex assignment.

d) Educational Importance - A conclusion to be drawn from this data is that teachers have to examine other variables in addition to student expectancy in order to determine how they can most effectively report their own expectancies toward students if they desire to improve students' academic performance.

Furthermore, this experiment suggests that there is an optimal level of arousal for each student as it relates to the complexity of the task in affecting maximum achievement performance on that task. In this research it was demonstrated that for students of low arithmetic ability a higher state of arousal, as increased by dissonance tension, was effective in improving performance for a significantly greater proportion of them on a more simple arithmetic assignment than for similar students on a more complex arithmetic assignment. Whereas, for students with higher arithmetic ability, a state of arousal increased by dissonance tension was more effective in improving performance for a significantly greater proportion of them on a more complex arithmetic assignment than for similar students on a more simple arithmetic assignment. Dissonance tension appears important in that it may increase a student's level of arousal, therefore, exerting a significant influence on the student's performance as it relates to the type of cognitive task at hand. These findings provide evidence that in order to maximize performance on a given assignment, a teacher must not only match the cognitive complexity of the assignment to the student's level of ability, but to his level of arousal as well.

Finally, this field experiment strongly verifies the necessity reported by Rosenthal and Evans (1969) to further investigate those mediating factors which affect the intellectual performance of students in teacher expectancy studies.